



Crompton Corporation
OSi Specialties Group
Sistersville Plant
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January 30, 2001

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PROJECT XL
SEMI-ANNUAL REPORT

We are pleased to submit the enclosed semi-annual report for the Crompton Corporation, OSi Specialties Business, Sistersville Plant's XL Project. Per our agreement with the US Environmental Protection Agency and the WV Division of Environmental Protection, this report is due on January 31, 2001.

Sincerely,

F. E. Dailey
Plant Manager

DISTRIBUTION

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SEMI-ANNUAL REPORT
FOR THE PERIOD JULY 1 TO DECEMBER 31, 2000

FOR PROJECT XL AGREEMENT

Between
Crompton Corporation OSi Specialties Business,

U.S. Environmental Protection Agency, and

West Virginia Division of Environmental Protection

STATUS OF THE XL PROJECT

On October 17, 1997, the Final Project Agreement (FPA) for the Crompton Corporation (formerly Witco Corporation), OSi Specialties Business, XL Project was signed by all parties. On March 30, 1998 Crompton and the WV Division of Environmental Protection entered into a Consent Order to implement the provisions of the FPA. On September 15, 1998, EPA published the final rule implementing the FPA from a federal perspective. That Federal Register notice (Volume 63, Number 178, Page 49384) includes a great deal of background on this XL project.

Methanol from the capper unit was first shipped for reuse on October 8, 1997. Methanol reuse under the XL agreement officially commenced on October 27, 1997.

The Waste Minimization / Pollution Prevention Study Team was formed December 16, 1997. The WM/PP Advisory Committee was formed on December 30, 1997. The study is complete and Crompton issued the Final Report on December 11, 1998. Since then, a Plant Pollution Prevention Council has worked to help foster and communicate "P2" ideas, and monitor progress.

The thermal oxidizer for the capper unit vents was started up on April 1, 1998. On July 15, 1998 the performance test for the oxidizer was completed. The oxidizer passed all of the performance requirements, and the results were reported to the EPA and DEP. The oxidizer is reducing total organics in the vent stream by 99.99%, versus the 98% minimum required by the Agreement. Total emissions reductions will be reported in the annual report in July.

SEMI-ANNUAL REPORT REQUIREMENTS

This semi-annual report must contain information as specified by the Federal Rule [40 CFR 264.1080(f)(2)(viii)(B)] implementing this project (as well as the Final Project Agreement, and the corresponding sections of the State Consent Order). Beginning in 1999, on January 31 of each year, the Sistersville Plant shall submit a semiannual written report to the EPA and WVDEP, with respect to the preceding six month period ending on December 31. The

following information is listed in the order prescribed in paragraphs (f)(2)(viii)(B)(1) through (f)(2)(viii)(B)(10) of this rule.

- (1) Instances of operating below the minimum operating temperature established for the thermal incinerator under paragraph (f)(2)(ii)(A)(1) of this section which were not corrected within 24 hours of onset.

July 1 to December 31, 2000	0 hours
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- (2) Any periods during which the capper unit was being operated to manufacture product while the flow indicator for the vent streams to the thermal incinerator showed no flow.

January 1 to June 30, 2000	13 hours
July 1 to December 31, 2000	26 hours
Total for 2000	39 hours
Maximum Allowed by Rule During Maintenance or Malfunction	240 hours

- (3) Any periods during which the capper unit was being operated to manufacture product while the flow indicator for any bypass device on the closed vent system to the thermal incinerator showed flow.

January 1 to June 30, 2000	13 hours
July 1 to December 31, 2000	26 hours
Total for 2000	39 hours
Maximum Allowed by Rule During Maintenance or Malfunction	240 hours

- (4) Information required to be reported during that six month period under the preconstruction permit issued under the state permitting program approved under subpart XX of 40 CFR Part 52 Approval and Promulgation of Implementation Plans for West Virginia. [WV Office of Air Quality Regulation 13 Permit]

There is no such information to be reported under the permit.

- (5) Any periods during which the capper unit was being operated to manufacture product while the condenser associated with the methanol recovery operation was not in operation.

None. The capper unit cannot operate to manufacture specification product while the condenser is not in operation. Should the condenser

begin operating improperly, the operator will quickly correct the situation, so that specification product can again be made.

- (6) The amount (in pounds and by month) of methanol collected by the methanol recovery operation during the six month period.

Month	Methanol Collected by the Methanol Recovery Operation, Calculated, lbs
January 2000	49,000
February	51,000
March	20,000
April	36,000
May	35,000
June	46,000
July	39,000
August	33,000
September	42,000
October	29,000
November	42,000
December 2000	15,000
Total for 2000	440,000

The above values are calculated from the total methanol collected for the year times the proportion of methanol generated (see Item 8, below) in each given month.

- (7) The amount (in pounds and by month) of collected methanol utilized for reuse, recovery, thermal recovery/treatment, or bio treatment, respectively, during the six month period.

Month	Collected Methanol Destination, Measured lbs		
	Reuse	Thermal Recovery / Treatment	Bio-treatment
October – December 1997	76,620	0	0
January – December 1998	424,254	0	0
January – December 1999	428,520	0	0
January 2000	0	0	0

Month	Collected Methanol Destination, Measured lbs		
	Reuse	Thermal Recovery / Treatment	Bio- treatment
February	81,520		
March	40,280		
April	80,300		
May	0		
June	39,520		
July	40,000	0	0
August	37,740	0	0
September	40,780	0	0
October	0	0	0
November	41,360	0	0
December 2000	38,560	0	0
[January – December 2000	440,060]		
Total Since Commencement of Reuse	1,369,454	0	0

We have thus met the Performance Standard that, “on an annual basis, the Sistersville Plant shall ensure that a minimum of 95% by weight of the methanol collected by the methanol recovery operation (also referred to as the "collected methanol") is utilized for reuse, recovery, or thermal recovery/treatment.” [40 CFR 264.1080(f)(2)(v)(A)] In fact, 100% has been reused.

- (8) The calculated amount (in pounds and by month) of methanol generated by operating the capper unit.

Month	Methanol Generated by the Capper Unit, Calculated, lbs
January 2000	77,000
February	81,000
March	32,000
April	57,000
May	55,000
June	73,000
July	61,000
August	52,000
September	66,000

Month	Methanol Generated by the Capper Unit, Calculated, lbs
October	45,000
November	66,000
December 2000	23,000
Total for 2000	688,000

As discussed in the Final Project Agreement, a portion of the methanol generated in the capper unit cannot be economically collected, but rather goes to the onsite waste water treatment unit via a steam ejector, or to the thermal oxidizer. This is the difference between the methanol generated (Item 8) and collected (Item 6).

- (9) The status of the WMPP Project, including the status of developing the WMPP Study Report.

The WMPP Study Report was issued to the US EPA and WV DEP by Crompton on December 11, 1998. The report explains in great detail all the work done during the Study, and our plans for continuing the work.

- (10) Beginning in the year after the Sistersville Plant submits the final WMPP Study Report required by paragraph (f)(2)(vi)(C) of this section, and continuing in each subsequent Semiannual Report required by paragraph (f)(2)(viii)(B) of this section, the Sistersville Plant shall report on the progress of the implementation of feasible WMPP opportunities identified in the WMPP Study Report. The Semiannual Report required by paragraph (f)(2)(viii)(B) of this section shall identify any cross media impacts or impacts to worker safety or community health issues that have occurred as a result of implementation of the feasible WMPP opportunities.

A Pollution Prevention Council was formed at the beginning of 1999 and consists of members from throughout the plant, to help foster and communicate "P2" ideas, and monitor progress. Council members periodically update our implementation of opportunities and the resulting savings. The following table shows the latest documented savings, which can vary from values shown in previous reports:

Year Opportunity was Implemented	Number of New P2 Opportunities Implemented	Recurring Wastes Prevented, lbs/yr	Recurring Cost Savings*, \$/yr
1997-98 Capper Operations (discussed above) Air Emissions and Sludge Reduction plus Methanol Recycle (Excludes capital savings from XL project) Actual for Calendar Year 1999		1,310,921	\$16,000
1997	10	376,000	\$228,000
1998	11	111,000	\$25,000
1999	34	1,164,000	\$690,000
2000	21	737,000	\$1,779,000
Total	76	3,668,921	\$2,738,000
* Note that these savings do not consider the expense of implementing them. Hence net savings will be less. It is often difficult to assign that expense. For example, a totally new process unit may cost millions of dollars to construct. If that new process produces less waste, how much of the design and construction expense ought to be assigned to the p2 benefits? In the case of a process change being done explicitly for p2 reasons, the expense is more easily determined.			

The last Annual Project Report, issued July 30, 2000, lists in detail the status of pollution prevention opportunities identified during and since the Study. The next annual report will do so as well.

No cross media impacts or impacts to worker safety or community health issues have occurred, as a result of implementing these WMPP opportunities. By far the majority of the opportunities implemented prevent the generation of waste in the first place, and so no cross-media transfers occur. Further, no safety or health issues have been identified for any of the opportunities implemented. Crompton carefully considers the potential for such concerns before implementing any facility or operational changes.

CONCLUSION

Crompton's XL Project has been very successful thus far. We have met all of our requirements, produced the intended superior environmental performance, and have received the temporary deferral from certain regulations. The Project is demonstrating an alternative to previously existing regulations and yielding cost savings to the company.

Please contact Tony Vandenberg of the Crompton Sistersville Plant (304-652-8812) for further information.